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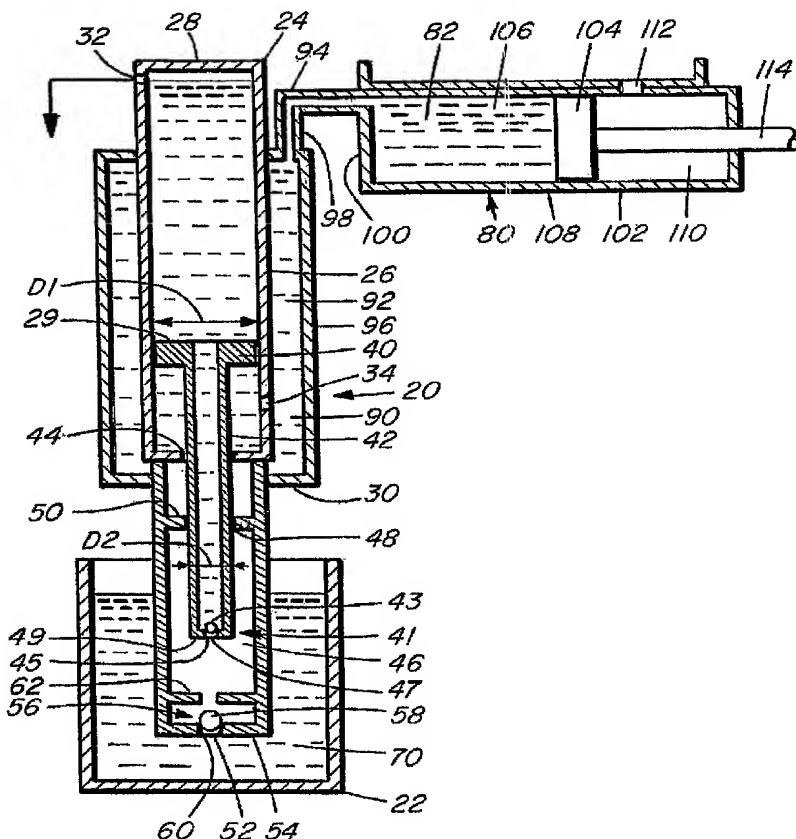
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(54) Title: HYDRAULIC RAM PUMP



(57) Abstract: A piston type pumping apparatus comprises a vertically oriented cylinder having a top and a bottom with a first aperture. There are first and second passageways for liquid in the cylinder at the top and bottom respectively thereof. A piston is reciprocally mounted within the cylinder and has an area against which pressurized fluid acts in the direction of movement of the piston. A hollow piston rod is connected to the piston and extends below the piston and slidably through the first aperture. There is a reload chamber below the cylinder. The piston rod extends slidably into the reload chamber and has a third passageway for liquid communicating thereto. A first one-way valve is located in the third passageway. There is also a fourth passageway that extends from the reload chamber to a source of liquid to be pumped and a second one-way valve therein.

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